

Power Amplifier

0.3-2GHz/50dB Gain/50dBm Psat

Model: TLPA0.3G2G-50-50

TLPA0.3G2G-50-50 is a power amplifier with a minimum gain of 50 dB and a minimum Psat of 50 dBm across the frequency range of 0.3 to 2 GHz. The DC power requirement for the amplifier is +28 VDC/850W. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N Female.

Features:

- Frequency range: 0.3-2GHz
- Gain: 50dB Min
- Output Power Psat: 50dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	0.3		2	GHz
增益 Gain	50			dB
增益平坦度 Gain Flatness		±3		dB
饱和输出功率 Output Psat	50			dBm
杂散 Spurious@Pout=50dBm			-60	dBc
谐波 Harmonics@Pout=50dBm			-10	dBc
输入驻波 Input VSWR			2.0	:1
直流电压 DC Voltage		+28		V DC
功耗 Power Consumption			850	W
阻抗 Impedance		50		Ohms

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/N Female	
直流供电接口 DC Power Supply Connector	D-SUB5W5	
尺寸 Size	271*264*113.5	mm
重量 Weight	15	Kg

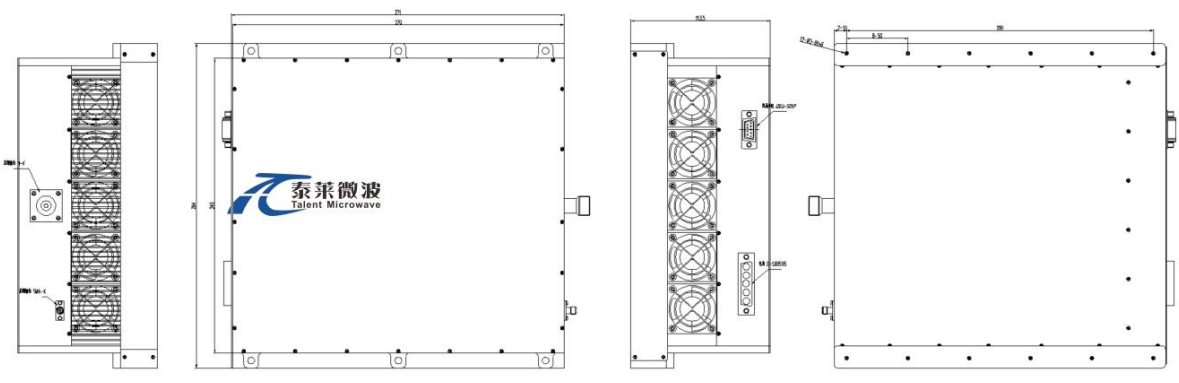
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+28 V
输入功率 RF Input Power	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



外形图 Outline Drawing:

Unit:mm



SUB-5W5 Define

引脚 Pin	功能 Function
A1-A2	+28V
A3-A5	GND



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

主要功能 Key Features:

参数 Parameter	特点 Advantages
监测功能 Monitoring protections	1, Output Power 2, Temperature 3, Voltage 4, Current
保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
控制功能 Control functions	Power setting on/off

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	°C
存储温度 Non-operating Temperature*	-30		+60	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave, 3 axis both directions			

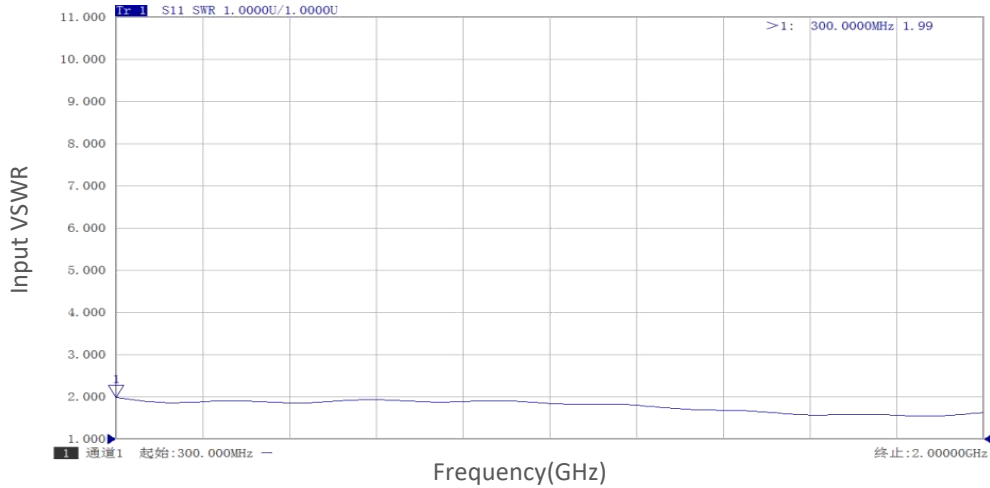
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

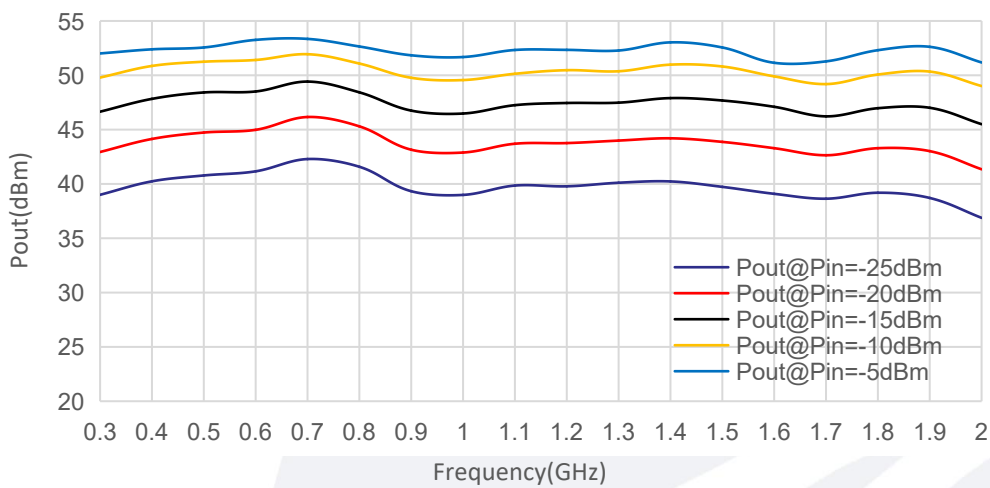
标准型号 Base Number	描述 Description	版本号 Revision
TLPA0.3G2G-50-50	Power amplifier 0.3-2GHz, Gain:50dB, Psat:50dBm, +28V DC, With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

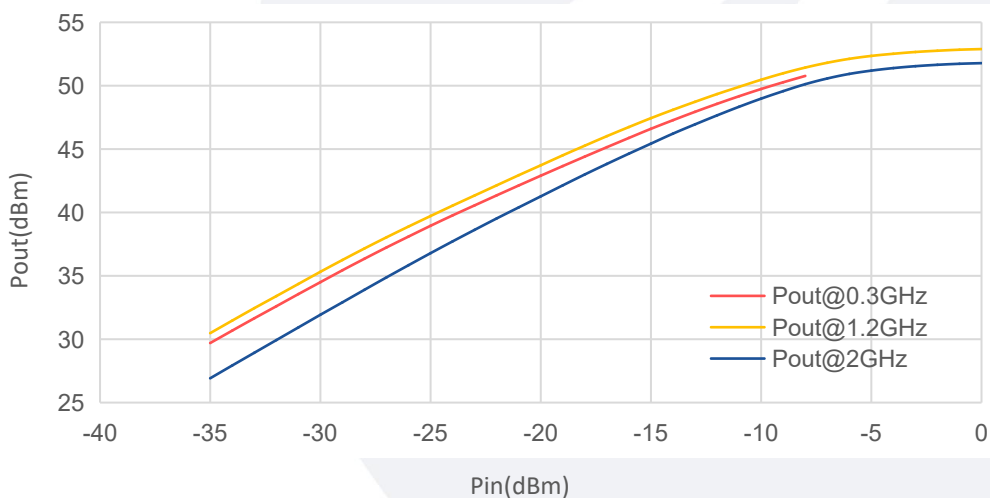
Input VSWR vs Frequency



Pout@Equal_Pin



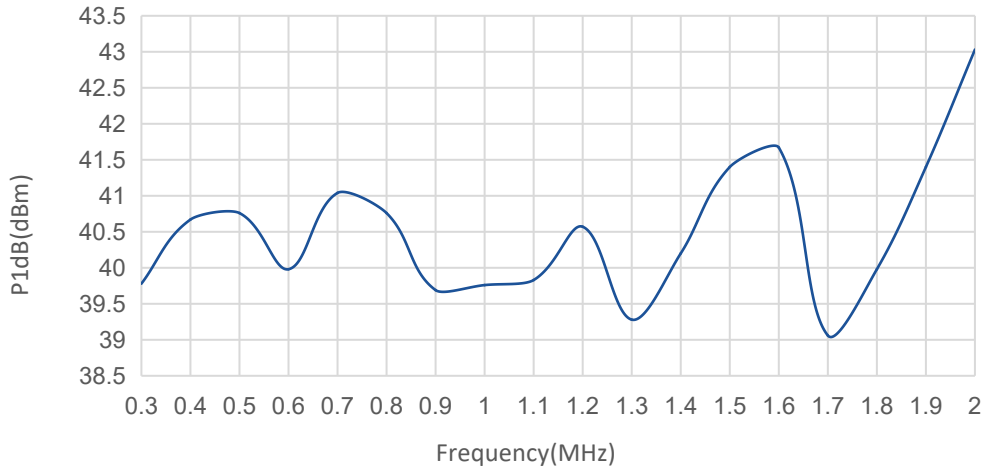
Pout@Pin



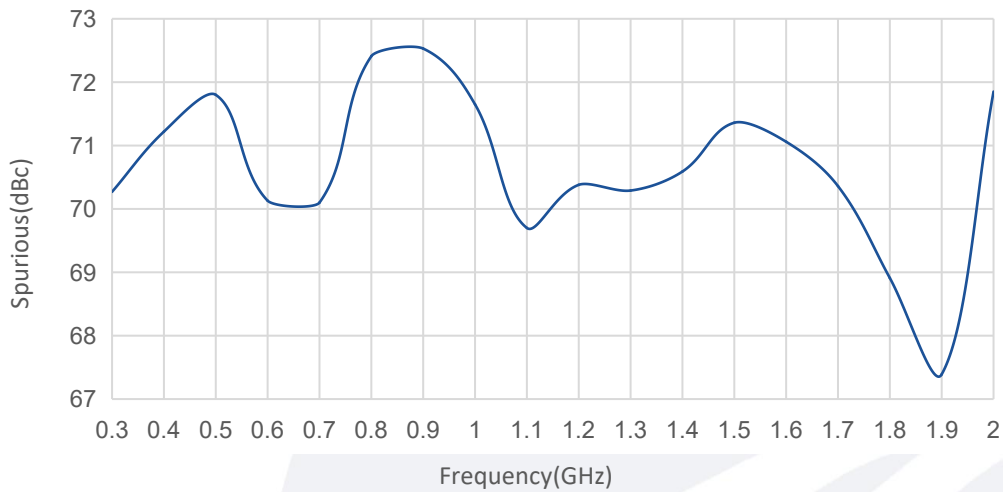
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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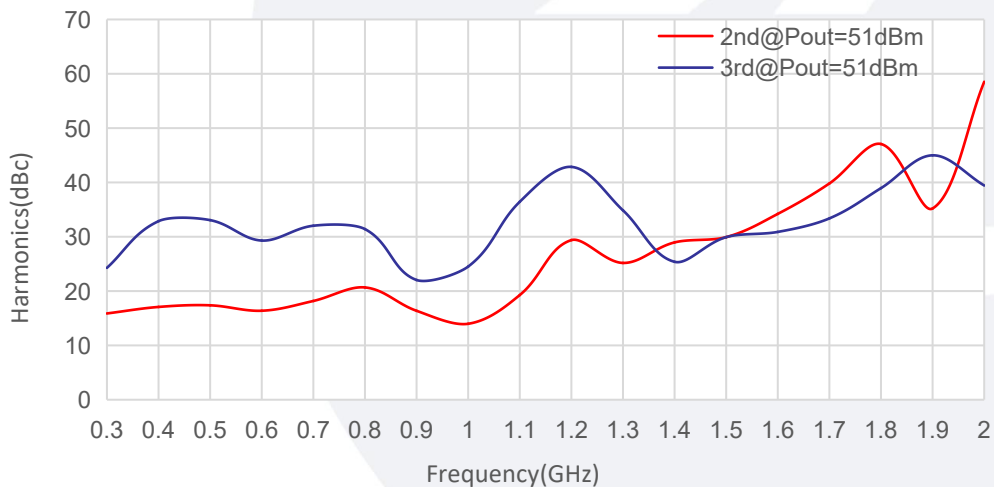
P1dB vs Frequency



Spurious VS Frequency



Harmonics VS Frequency



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